Test Report
Aggregate Gradation

Project Name	1. Improvement of drain at thirumenahalli village main road in ward no 05 byatarayanapura sub division.2) Improvement of road and drain at thirumenahalli junction to agrahara layout govt hospital in ward no05 byatarayanapura sub division 3)Improvement of roads and drain at chokkanahalli village main road cross road in ward no 05 byatarayanapura sub division 4) Improvement of roads and drain at markendeyanagara main road and cross roads in ward no 05 byatarayanapura sub division 5) Improvement of roads and drain at sriraj layout main road and cross road in ward no 05 byatarayanapura sub division 6) Improvement of roads and drain at kogilu surrounding in ward no 05 byatarayanapura sub division 7)Improvement of roads and drain at agrahara village cross roads in ward no 05 byatarayanapura sub division 8) Improvement of roads and drain at agrahara layout kallappa reddy main road in ward no 05 byatarayanapura sub division
Client	Executive Engineer Project Division Yelahanka Zone
Job No	MCTPL/BBMP/Project Division Yelahanka Zone /PMC/2017-2018/QR/P-9/2
Mix Type	Wet Mix Macadam
Contractor	Sri. S.K. CHANDRA
Test Method	IS : 2386 (Part - 1) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	Wet Mix Plant
Material	Coarse Aggregates
Sample No	4
Date	27-Apr-2018

Weight of Sample: 4000 gms

Sl. No.	I.S. Sieve size (mm)	Weight Retained (gm)	Percentage of weight Retained (%)	Cumulative Percentage of weight retained	Cumulative % of Passing		Remarks
					Test Result	Gradation Limits as per MORT&H	
1	53	0	0	0	100	100	Gradation satisfies the MORT&H Specification for Wet Mix macadam
2	45	104.5	2.61	2.61	97.39	95-100	
3	22.4	1106.5	27.66	30.27	69.73	60-80	
4	11.2	806.5	20.16	50.43	49.57	40-60	
5	4.75	716.5	17.91	68.34	31.66	25-40	
6	2.36	408.5	10.21	78.55	21.45	15-30	
7	0.06	305.5	7.64	86.19	13.81	(8-22)	
8	0.075	550	13.75	99.94	0.06	0-5	

Note:

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Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

Test Report

Liquid and Plastic Limit by Cone Apparatus

Project Name	1. Improvement of drain at thirumenahalli village main road in ward no 05 byatarayanapura sub division.2) Improvement of road and drain at thirumenahalli junction to agrahara layout govt hospital in ward no05 byatarayanapura sub division 3)Improvement of roads and drain at chokkanahalli village main road cross road in ward no 05 byatarayanapura sub division 4) Improvement of roads and drain at markendeyanagara main road and cross roads in ward no 05 byatarayanapura sub division 5) Improvement of roads and drain at sriraj layout main road and cross road in ward no 05 byatarayanapura sub division 6) Improvement of roads and drain at kogilu surrounding in ward no 05 byatarayanapura sub division 7)Improvement of roads and drain at agrahara village cross roads in ward no 05 byatarayanapura sub division 8) Improvement of roads and drain at agrahara layout kallappa reddy main road in ward no 05 byatarayanapura sub division
Client	Executive Engineer Project Division Yelahanka Zone
Job No	MCTPL/BBMP/Project Division Yelahanka Zone /PMC/2017-2018/QR/P-9/2
Mix Type	Wet Mix Macadam
Contractor	Sri. S.K. CHANDRA
Test Method	Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	Wet Mix Plant
Material	Coarse Aggregates
Sample No	1
Date	25-Apr-2018

Sl No	Description	Unit	Liquid Limit	Plastic Limit
	Penetration	mm		-
1	Container No	no		
2	Weight of container,(A)	gm		
3	Weight of container + wet soil, (B)	gm	**Non Plastic**	**Non Plastic**
4	Weight of container + dry soil, (C)	gm		
5	Weight of water, D=(B - C)	gm		
6	Weight of dry soil, E=(C - A)	gm		
7	Water Content, D/E x 100 (%)	gm		

Comments: <6 so Non Plastic

Note:

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Project Division
Yelahanka Zone
Bangalore

Test Report

Liquid and Plastic Limit by Cone Apparatus

Project Name	1. Improvement of drain at thirumenahalli village main road in ward no 05 byatarayanapura sub division.2) Improvement of road and drain at thirumenahalli junction to agrahara layout govt hospital in ward no05 byatarayanapura sub division 3)Improvement of roads and drain at chokkanahalli village main road cross road in ward no 05 byatarayanapura sub division 4) Improvement of roads and drain at markendeyanagara main road and cross roads in ward no 05 byatarayanapura sub division 5) Improvement of roads and drain at sriraj layout main road and cross road in ward no 05 byatarayanapura sub division 6) Improvement of roads and drain at kogilu surrounding in ward no 05 byatarayanapura sub division 7)Improvement of roads and drain at agrahara village cross roads in ward no 05 byatarayanapura sub division 8) Improvement of roads and drain at agrahara layout kallappa reddy main road in ward no 05 byatarayanapura sub division
Client	Executive Engineer Project Division Yelahanka Zone
Job No	MCTPL/BBMP/Project Division Yelahanka Zone /PMC/2017-2018/QR/P-9/2
Mix Type	Wet Mix Macadam
Contractor	Sri. S.K. CHANDRA
Test Method	Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	Wet Mix Plant
Material	Coarse Aggregates
Sample No	2
Date	25-Apr-2018

Sl No	Description	Unit	Liquid Limit	Plastic Limit
	Penetration	mm	**Non Plastic**	**Non Plastic**
1	Container No	no		
2	Weight of container,(A)	gm		
3	Weight of container + wet soil, (B)	gm		
4	Weight of container + dry soil, (C)	gm		
5	Weight of water, D=(B - C)	gm		
6	Weight of dry soil, E=(C - A)	gm		
7	Water Content, D/E x 100 (%)	gm		

Comments: <6 so Non Plastic

Note:

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Yelahanka Zone
Bangalore

Test Report

Liquid and Plastic Limit by Cone Apparatus

Project Name	1. Improvement of drain at thirumenahalli village main road in ward no 05 byatarayanapura sub division.2) Improvement of road and drain at thirumenahalli junction to agrahara layout govt hospital in ward no05 byatarayanapura sub division 3)Improvement of roads and drain at chokkanahalli village main road cross road in ward no 05 byatarayanapura sub division 4) Improvement of roads and drain at markendeyanagara main road and cross roads in ward no 05 byatarayanapura sub division 5) Improvement of roads and drain at sriraj layout main road and cross road in ward no 05 byatarayanapura sub division 6) Improvement of roads and drain at kogilu surrounding in ward no 05 byatarayanapura sub division 7)Improvement of roads and drain at agrahara village cross roads in ward no 05 byatarayanapura sub division 8) Improvement of roads and drain at agrahara layout kallappa reddy main road in ward no 05 byatarayanapura sub division
Client	Executive Engineer Project Division Yelahanka Zone
Job No	MCTPL/BBMP/Project Division Yelahanka Zone /PMC/2017-
Mix Type	Wet Mix Macadam
Contractor	Sri. S.K. CHANDRA
Test Method	Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	Wet Mix Plant
Material	Coarse Aggregates
Sample No	3
Date	27-Apr-2018

Sl No	Description	Unit	Liquid Limit	Plastic Limit
	Penetration	mm	**Non Plastic**	**Non Plastic**
1	Container No	no		
2	Weight of container,(A)	gm		
3	Weight of container + wet soil, (B)	gm		
4	Weight of container + dry soil, (C)	gm		
5	Weight of water, D=(B - C)	gm		
6	Weight of dry soil, E=(C - A)	gm		
7	Water Content, D/E x 100 (%)	gm		

Comments: <6 so Non Plastic

Note:

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Yelahanka Zone
Bangalore

Test Report

Liquid and Plastic Limit by Cone Apparatus

Project Name	1. Improvement of drain at thirumenahalli village main road in ward no 05 byatarayanapura sub division.2) Improvement of road and drain at thirumenahalli junction to agrahara layout govt hospital in ward no05 byatarayanapura sub division 3)Improvement of roads and drain at chokkanahalli village main road cross road in ward no 05 byatarayanapura sub division 4) Improvement of roads and drain at markendeyanagara main road and cross roads in ward no 05 byatarayanapura sub division 5) Improvement of roads and drain at sriraj layout main road and cross road in ward no 05 byatarayanapura sub division 6) Improvement of roads and drain at kogilu surrounding in ward no 05 byatarayanapura sub division 7)Improvement of roads and drain at agrahara village cross roads in ward no 05 byatarayanapura sub division 8) Improvement of roads and drain at agrahara layout kallappa reddy main road in ward no 05 byatarayanapura sub division
Client	Executive Engineer Project Division Yelahanka Zone
Job No	MCTPL/BBMP/Project Division Yelahanka Zone /PMC/2017-2018/QR/P-9/2
Mix Type	Wet Mix Macadam
Contractor	Sri. S.K. CHANDRA
Test Method	Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	Wet Mix Plant
Material	Coarse Aggregates
Sample No	4
Date	25-Apr-2018

Sl No	Description	Unit	Liquid Limit	Plastic Limit
	Penetration	mm		
1	Container No	no		-
2	Weight of container,(A)	gm		
3	Weight of container + wet soil, (B)	gm		
4	Weight of container + dry soil, (C)	gm	**Non Plastic**	**Non Plastic**
5	Weight of water, D=(B - C)	gm		
6	Weight of dry soil, E=(C - A)	gm		
7	Water Content, D/E x 100 (%)	gm		

Comments: <6 so Non Plastic

Note:

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Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

Test Report
Field Density Test by Sand Replacement Method

Project Name	1. Improvement of drain at thirumenahalli village main road in ward no 05 byatarayanapura sub division.2) Improvement of road and drain at thirumenahalli junction to agrahara layout govt hospital in ward no05 byatarayanapura sub division 3)Improvement of roads and drain at chokkanahalli village main road cross road in ward no 05 byatarayanapura sub division 4) Improvement of roads and drain at markendeyanagara main road and cross roads in ward no 05 byatarayanapura sub division 5) Improvement of roads and drain at sriraj layout main road and cross road in ward no 05 byatarayanapura sub division 6) Improvement of roads and drain at kogilu surrounding in ward no 05 byatarayanapura sub division 7)Improvement of roads and drain at agrahara village cross roads in ward no 05 byatarayanapura sub division 8) Improvement of roads and drain at agrahara layout kallappa reddy main road in ward no 05 byatarayanapura sub division
Client	Executive Engineer Project Division Yelahanka Zone
Job No	MCTPL/BBMP/Project Division Yelahanka Zone /PMC/2017-2018/QR/P-9/2
Mix Type	Wet Mix Macadam
Contractor	Sri. S.K. CHANDRA
Test Method	IS: 2720 (Part - 16) 1963 & Specification for Road & Bridge Works,
Location	bay
Material	Wet Mix Macadam
Sample No	1
Date	29-Apr-2018

Test Hole No	**1**
MDD	2.24
OMC in %	3.2
Bulk Density Ys	1.392
Weight of Sand In cone W1 (gm)	1195
Weight Of Wet soil From Hole (W2)	4321
Wt Of Sand +Cylinder Before Pouring (W3)gm	17000
Wt Of Sand +Cylinder After Pouring (W4) gm	13172
Wt Of Sand In Hole: W5 = W3 - W4- W1 (gm)	2633
Volume of Hole: V= W5/ Ys	1891.52
Bulk Density Yb= W2/V (gm/cc)	2.28
Moisture Meter Reading (%)	1.62
Moisture Content : w (From Graph In %)	3.22
Dry Density Yd = Yb/(1+W/100)	2.21
Field Compaction(%)	98.80

Note:

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Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

Test Report
Field Density Test by Sand Replacement Method

Project Name	1. Improvement of drain at thirumenahalli village main road in ward no 05 byatarayanapura sub division.2) Improvement of road and drain at thirumenahalli junction to agrahara layout govt hospital in ward no05 byatarayanapura sub division 3)Improvement of roads and drain at chokkanahalli village main road cross road in ward no 05 byatarayanapura sub division 4) Improvement of roads and drain at markendeyanagara main road and cross roads in ward no 05 byatarayanapura sub division 5) Improvement of roads and drain at sriraj layout main road and cross road in ward no 05 byatarayanapura sub division 6) Improvement of roads and drain at kogilu surrounding in ward no 05 byatarayanapura sub division 7)Improvement of roads and drain at agrahara village cross roads in ward no 05 byatarayanapura sub division 8) Improvement of roads and drain at agrahara layout kallappa reddy main road in ward no 05 byatarayanapura sub division
Client	Executive Engineer Project Division Yelahanka Zone
Job No	MCTPL/BBMP/Project Division Yelahanka Zone /PMC/2017-2018/QR/P-9/2
Mix Type	Wet Mix Macadam
Contractor	Sri. S.K. CHANDRA
Test Method	IS: 2720 (Part - 16) 1963 & Specification for Road & Bridge Works,
Location	bay
Material	Wet Mix Macadam
Sample No	2
Date	29-Apr-2018

Test Hole No	**2**
MDD	2.24
OMC in %	3.20
Bulk Density Ys	1.39
Weight of Sand In cone W1 (gm)	1195.00
Weight Of Wet soil From Hole (W2)	4326.00
Wt Of Sand +Cylinder Before Pouring (W3)gm	17000.00
Wt Of Sand +Cylinder After Pouring (W4) gm	13168.00
Wt Of Sand In Hole: W5 = W3 - W4- W1 (gm)	2637.00
Volume of Hole: V= W5/ Ys	1894.40
Bulk Density Yb= W2/V (gm/cc)	2.28
Moisture Meter Reading (%)	1.62
Moisture Content : w (From Graph In %)	3.31
Dry Density Yd = Yb/(1+W/100)	2.21
Field Compaction(%)	98.68

Note:

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Project Division
Yelahanka Zone
Bangalore

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Test Report
Field Density Test by Sand Replacement Method

Project Name	1. Improvement of drain at thirumenahalli village main road in ward no 05 byatarayanapura sub division.2) Improvement of road and drain at thirumenahalli junction to agrahara layout govt hospital in ward no05 byatarayanapura sub division 3)Improvement of roads and drain at chokkanahalli village main road cross road in ward no 05 byatarayanapura sub division 4) Improvement of roads and drain at markendeyanagara main road and cross roads in ward no 05 byatarayanapura sub division 5) Improvement of roads and drain at sriraj layout main road and cross road in ward no 05 byatarayanapura sub division 6) Improvement of roads and drain at kogilu surrounding in ward no 05 byatarayanapura sub division 7)Improvement of roads and drain at agrahara village cross roads in ward no 05 byatarayanapura sub division 8) Improvement of roads and drain at agrahara layout kallappa reddy main road in ward no 05 byatarayanapura sub division
Client	Executive Engineer Project Division Yelahanka Zone
Job No	MCTPL/BBMP/Project Division Yelahanka Zone /PMC/2017-2018/QR/P-9/2
Mix Type	Wet Mix Macadam
Contractor	Sri. S.K. CHANDRA
Test Method	IS: 2720 (Part - 16) 1963 & Specification for Road & Bridge Works,
Location	bay
Material	Wet Mix Macadam
Sample No	3
Date	1-May-2018

Test Hole No	**3**
MDD	2.24
OMC in %	3.20
Bulk Density Ys	1.39
Weight of Sand In cone W1 (gm)	1195.00
Weight Of Wet soil From Hole (W2)	4432.00
Wt Of Sand +Cylinder Before Pouring (W3)gm	17000.00
Wt Of Sand +Cylinder After Pouring (W4) gm	13112.00
Wt Of Sand In Hole: W5 = W3 - W4- W1 (gm)	2693.00
Volume of Hole: V= W5/ Ys	1934.63
Bulk Density Yb= W2/V (gm/cc)	2.29
Moisture Meter Reading (%)	1.58
Moisture Content : w (From Graph In %)	3.28
Dry Density Yd = Yb/(1+W/100)	2.22
Field Compaction(%)	99.02

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Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

Test Report
Field Density Test by Sand Replacement Method

Project Name	1. Improvement of drain at thirumenahalli village main road in ward no 05 byatarayanapura sub division.2) Improvement of road and drain at thirumenahalli junction to agrahara layout govt hospital in ward no05 byatarayanapura sub division 3)Improvement of roads and drain at chokkanahalli village main road cross road in ward no 05 byatarayanapura sub division 4) Improvement of roads and drain at markendeyanagara main road and cross roads in ward no 05 byatarayanapura sub division 5) Improvement of roads and drain at sriraj layout main road and cross road in ward no 05 byatarayanapura sub division 6) Improvement of roads and drain at kogilu surrounding in ward no 05 byatarayanapura sub division 7)Improvement of roads and drain at agrahara village cross roads in ward no 05 byatarayanapura sub division 8) Improvement of roads and drain at
Client	Executive Engineer Project Division Yelahanka Zone
Job No	MCTPL/BBMP/Project Division Yelahanka Zone /PMC/2017-2018/QR/P-
Mix Type	Wet Mix Macadam
Contractor	Sri. S.K. CHANDRA
Test Method	IS: 2720 (Part - 16) 1963 & Specification for Road & Bridge Works,
Location	bay
Material	Wet Mix Macadam
Sample No	4
Date	29-Apr-2018

Test Hole No	**4**
MDD	2.24
OMC in %	3.20
Bulk Density Ys	1.39
Weight of Sand In cone W1 (gm)	1195.00
Weight Of Wet soil From Hole (W2)	4432.00
Wt Of Sand +Cylinder Before Pouring (W3)gm	17000.00
Wt Of Sand +Cylinder After Pouring (W4) gm	13111.00
Wt Of Sand In Hole: W5 = W3 - W4- W1 (gm)	2694.00
Volume of Hole: V= W5/ Ys	1935.34
Bulk Density Yb= W2/V (gm/cc)	2.29
Moisture Meter Reading (%)	1.52
Moisture Content : w (From Graph In %)	3.35
Dry Density Yd = Yb/(1+W/100)	2.22
Field Compaction(%)	98.92

Note:

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Asst. Executive Engineer
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Yelahanka Zone
Bangalore

Test Report
Workability

Project Name	1. Improvement of drain at thirumenahalli village main road in ward no 05 byatarayanapura sub division.2) Improvement of road and drain at thirumenahalli junction to agrahara layout govt hospital in ward no05 byatarayanapura sub division 3)Improvement of roads and drain at chokkanahalli village main road cross road in ward no 05 byatarayanapura sub division 4) Improvement of roads and drain at markendeyanagara main road and cross roads in ward no 05 byatarayanapura sub division 5) Improvement of roads and drain at sriraj layout main road and cross road in ward no 05 byatarayanapura sub division 6) Improvement of roads and drain at kogilu surrounding in ward no 05 byatarayanapura sub division 7)Improvement of roads and drain at agrahara village cross roads in ward no 05 byatarayanapura sub division 8) Improvement of roads and drain at agrahara layout kallappa reddy main road in ward no 05 byatarayanapura sub division
Client	Executive Engineer Project Division Yelahanka Zone
Job No	MCTPL/BBMP/Project Division Yelahanka Zone /PMC/2017-2018/QR/P-9/2
Mix Type	Pavement Quality Concrete(M30)
Contractor	Sri S K Chandra
Test Method	IS : 4031 (Part 5) -1988 & Specification for Road & Bridge Works, MORT&H, Rev-V.
Location	At site
Material	Concrete
Sample No	1
Date	21-May-2018

Sl. No.	Determination	Trial 1	Trial 2
1	Bottom Diameter(cm)	20	20
2	Top Diameter(cm)	10	10
3	Height(cm)	30	30
4	Slump(mm)	28	29
5	Average	28.5	

Comments: Maximum allowable slump as per MORT&H is 25±15mm

Note:

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